



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/801,734 | 03/09/2001 | Genryou Umitsuki | 04853.0060 | 5988 |

22852 7590 09/11/2002
FINNEGAN, HENDERSON, FARABOW, GARRETT &
DUNNER LLP
1300 I STREET, NW
WASHINGTON, DC 20006

[REDACTED] EXAMINER

KATCHEVES, KONSTANTINA T

[REDACTED] ART UNIT [REDACTED] PAPER NUMBER

1636

DATE MAILED: 09/11/2002

8

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | |
|------------------------------|------------------------|---------------------|
| Office Action Summary | Application No. | Applicant(s) |
| | 09/801,734 | UMITSUKI ET AL. |
| | Examiner | Art Unit |
| | Konstatina Katcheves | 1636 |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 25 June 2002.

2a) This action is **FINAL**. 2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1-7 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) Claim(s) _____ is/are allowed.

6) Claim(s) 1-7 is/are rejected.

7) Claim(s) _____ is/are objected to.

8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) The proposed drawing correction filed on _____ is: a) approved b) disapproved by the Examiner.
 If approved, corrected drawings are required in reply to this Office action.

12) The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All b) Some * c) None of:

- 1) Certified copies of the priority documents have been received.
- 2) Certified copies of the priority documents have been received in Application No. _____.
- 3) Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
 a) The translation of the foreign language provisional application has been received.

15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

| | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claims 1-7 are pending in the present application.

Response to Amendment

The rejections of claims 1-7 under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification have been withdrawn in view of Applicant's Amendment and Response filed 25 June 2002.

The rejections of claims 1-7 under 35 U.S.C. 112, second paragraph, have been withdrawn in view of Applicant's Amendment and Response filed 25 June 2002.

The rejection of claims 1-4, 6 and 7 under 35 U.S.C. 102(b) as being anticipated by JP 53124693 (the '693 patent) (In Applicant's IDS) has been withdrawn in view of Applicant's Amendment and Response filed 25 June 2002.

The rejection of claims 1-7 under 35 U.S.C. 102(e) as being anticipated by Van Den Broek et al. (US Patent No. 6,090,607) has been withdrawn in view of Applicant's Amendment and Response filed 25 June 2002.

Response to Arguments

Applicant's arguments are moot in view of the following new grounds of rejection.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over either Kauppinen et al. (US Patent No. 5,994,113) or Umitsuki (EP 0 967 286) in view of Murakami et al. (EP 0 427 385).

The invention of the instant claims is drawn to a transformed koji mold, *Aspergillus sojae*, *A. oryzae*, *A. tamarii* that has increase peptidase and protease activity, a method of culturing the mold and a method of manufacturing a flavor enhancer from the mold.

Kauppinen et al. and Umitsuke et al. disclose an expression vector harboring a peptidase gene wherein the gene construct is transformed into a suitable yeast host such as *Aspergillus*.

See Kaupinen et al., column 6 and see Umitsike et al. page 9.

Murakami et al. disclose a gene expression vector comprising a useful enzyme such as a protease. The construct is used to express useful substances in molds such as *A. sojae*, *A. oryzae*, and *A. tamarii*. See abstract and page 3.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to transform a suitable yeast host such as *A. sojae*, *A. oryzae*, and *A. tamarii* with a construct or constructs that comprises both a peptidase or protease. The references cited teach various vector constructs, which express either peptidases or proteases in the desired *Aspergillus* host cells. It is well within the purview of the ordinary skilled artisan to make constructs expressing multiple genes or to transform cells with multiple constructs each having the desired

Art Unit: 1636

gene. One of ordinary skill in the art would have been motivated to express both these types of enzyme hydrolases because protein hydrolysates are commonly used in food products to perform enzymatic hydrolysis of vegetable, yeast or animal proteins. The hydrolysis of these proteins results in a product useful as a food additive and flavor enhancer. Thus, the invention as a whole would have been *prima facie* obvious to one of skill in the art at the time the invention was made.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Konstantina Katcheves whose telephone number is (703) 305-1999. The examiner can normally be reached on Monday through Friday 7:30 to 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dr. Remy Yucel, Ph.D. can be reached on (703) 305-1998. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305-3014 for regular communications and (703) 305-7939 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3388.

Konstantina Katcheves
September 5, 2002


REMY YUCEL, PH.D.
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1600